

MODEL FEATURES

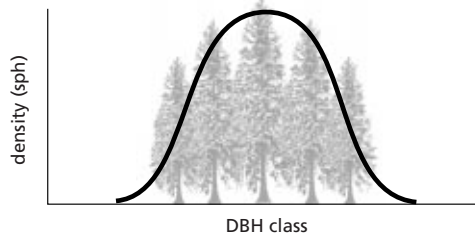
Prognosis^{BC} simulates the development of a stand from its current condition (including bareground) to a desired future state.

The stand can be composed of one or several conifer species of similar age or many ages.

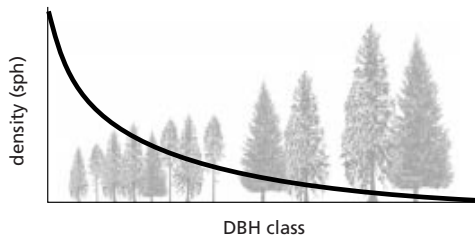
One of the model's strengths is its ability to simulate almost any form of harvesting, from clearcutting to partial cutting.

Prognosis^{BC} can simulate thinning from above, below, or by diameter class—with or without species retention preferences. Thinnings can be scheduled as single or repeated events, by either calendar year or stand condition.

single-species, even-aged



multi-species, multi-aged



MODEL AVAILABILITY

A pilot version of Prognosis^{BC} was released for general use in April 1998, and a second release is anticipated in 1999.

The model and tutorials are available from the G&Y Model Support Centre. The Centre also operates a "help desk" for model users.

tel: 604.739.9806
email: gymodels@istar.ca

TRAINING

One- to two-day training courses are available on request from BC Ministry of Forests.

tel: 250.356.0183
email: barry.snowdon@gems7.gov.bc.ca

Target Audience

Silviculturists, planners, G&Y foresters

Workshop Content

Context, model structure and operation, strength and weaknesses, data requirements, current applications

Hands-on with Prognosis^{BC}

Field session, survey procedures

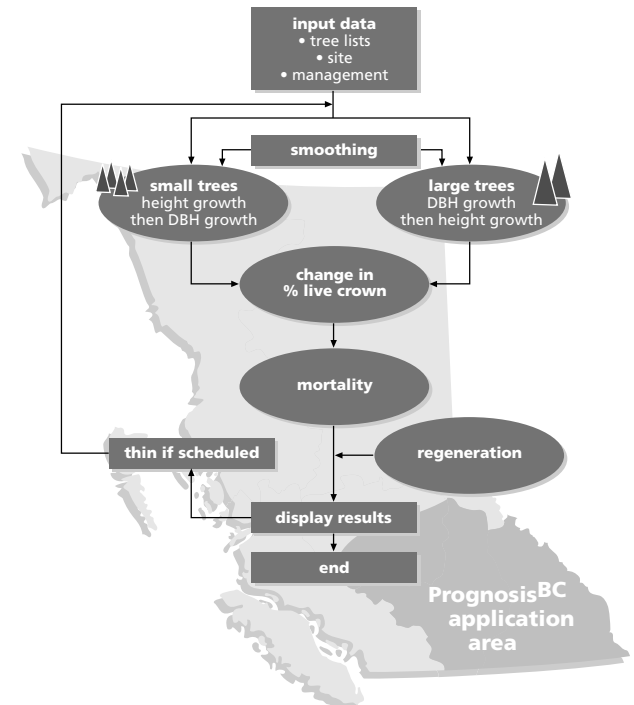
Prerequisites

Familiarity with Windows 95, Microsoft Office, and TIPS Y

A GROWTH AND YIELD MODEL FOR SIMPLE AND COMPLEX STANDS

Prognosis^{BC} is a computer model that forecasts future stand conditions based on the expected growth and mortality of individual trees within a stand.

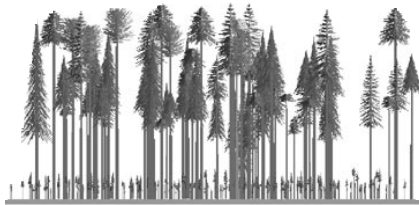
The model has been adapted from the US Forest Service *Forest Vegetation Simulator (FVS)* for use in BC's southeastern Interior. Ongoing work, approved by BC's Forest Productivity Council, is supported by partners in industry, government, Forest Renewal BC, the University of BC, and consultants.



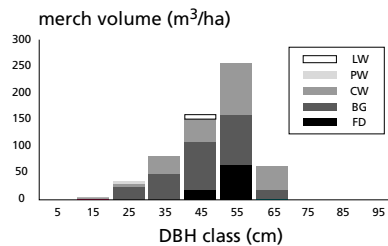
DATA INPUTS/ MODEL OUTPUTS

The model can use data from permanent or temporary sample plots, silviculture cruises, or stand tables to represent the current stand condition.

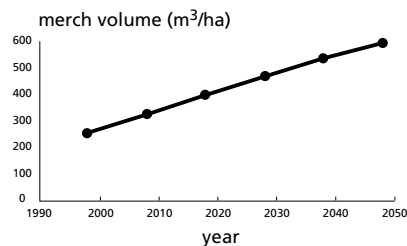
Prognosis^{BC} reports on yield, species composition, and stand structure over time. The model's graphic display helps to portray stand dynamics and the yield implications of different management regimes. Users can view two attributes of a stand (e.g., stock table and yield) simultaneously, or compare different management regimes.



stand structure



stock table



yield table

HOW THE MODEL WORKS

THE BASE MODEL

The base model predicts diameter and height growth, crown development, mortality, and regeneration for individual trees.

The regeneration sub-model is still under development in BC. In the interim, users must specify the amount and composition of the regeneration.

MODEL EXTENSIONS

An extension to the model for root disease enables Prognosis^{BC} to simulate the impact of *Annosus*, *Phellinus*, or *Armillaria* on stand development. It also enables Prognosis^{BC} to forecast the effect of management options such as stumping on development of the disease.

The newest extension—Prognosis EI—is an environmental indicators model for watershed-level applications. It reports spatial and non-spatial landscape and stand-level indicators for user-defined management regimes.

SOFTWARE COMPONENTS

Prognosis^{BC} has three software components. DATAProg, a spreadsheet-style application, is used to format the tree list that describes an existing stand. A menu-driven interface called SIMProg is used to specify the simulation parameters. VIEWProg facilitates the display of stand and stock tables, and changes in species composition through time. User tutorials and on-line help are available for each component.

RECENT APPLICATIONS

Nelson Region

- case study with Prognosis EI in the West Arm Demonstration Forest (ICH)
- explored the impact of partial cutting options on yield at the stand and forest level (IDF, ESSF, ICH, MS)

Cariboo Region

- examined the impacts of three partial-cutting regimes for mule deer winter range on timber flow (IDF)

Prince George Region

- assessed the impact of selection management on yield using a local calibration of Prognosis^{BC} (SBS)

Kamloops and Nelson Regions

- simulated the impacts of different levels of root disease on stand development (MS, ICH, IDF)

